

**REMARKS**

Reconsideration of the present application as amended is respectfully requested.

Claims 1-2, and 4-24 have been amended. Claims 1, 2 and 4-24 are currently pending. An interview between Applicant's representative and Examiner Wimer was conducted on December 8, 2003, in which proposed amendments to the claims were discussed. Claims 1 and 11 have been amended in view of this discussion. Support for these amendments to the claims may be found at at least page 6, line 34 to page 7, line 12 and Figs. 3 and 5a-5c of the specification as originally filed. Applicant wishes to thank Examiner Wimer for the courtesies extended during the interview. Applicant has also amended claims 1-2 and 4-24 to better conform them to U.S. practice. These amendments to claims 1-2 and 4-24 are not intended to narrow the scope of claims 1-2 and 4-24 in any way.

Claims 1, 2, 4, 5, 7-11, 16/11, 17-19, and 24 stand rejected under 35 U.S.C. 102(b) as anticipated by U.S. Patent No. 5,572,227 to Pal et al. ("Pal '227"). Independent claim 1 has been amended to include the feature of "wherein the first and second antennas are formed on at least one planar portion of a common support element." Independent claim 11 has been amended to include the feature of "wherein the first and second antennas are formed on at least one planar portion of a common support element." It was indicated by Examiner Wimer in the Interview Summary mailed on December 10, 2003, that these amendments define over Pal '227. Applicant submits that there is no teaching by Pal '227 of first and second antennas formed on at least one planar portion of a common support element. Applicant respectfully submits that independent claim 1 and independent claim 11 each distinguish over Pal '227 and requests that the 35 U.S.C. 102(b) rejection of claims 1 and 11 be withdrawn.

Claims 2, 4, 5, 7-10, 16-19 and 24 are dependent upon and include the limitations of independent claims 1 and 11. Therefore, for at least the reasons as discussed with respect to independent claim 1 and independent claim 11, Applicant respectfully submits that claims 2, 4, 5, 7-10, 16-19 and 24 also distinguish over Pal '227 and requests that the 35 U.S.C. 102(b) rejection of claims 2, 4, 5, 7-10, 16-19 and 24 be withdrawn.

Claims 1, 2, 4, 5, 7-12, 16/11, 16/12, 17-19, and 24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over UK Patent Application No. 2322011A to Pal et al. ("Pal

‘011”) in view of Pal ‘227. As previously discussed, independent claim 1 and independent claim 11 have been amended to include the feature of “wherein the first and second antennas are formed on at least one planar portion of a common support element.” It was indicated by Examiner Wimer in the Interview Summary mailed on December 10, 2003, that these amendments define over Pal ‘011 and Pal ‘227. Pal ‘011 describes a helical multi-element antenna fabricated by forming a printed circuit board into a truncated cylindrical support whereon antenna elements and matching networks are provided. Pal ‘227 describes a multiband antenna system including several antenna elements provided in the form of quadrifilar helices spaced from each other on the surface of a hollow cylindrical insulator. Applicant submits that there is no teaching by either of Pal ‘011 or Pal ‘227 of first and second antennas formed on at least one planar portion of a common support element. For at least the foregoing reasons, Applicant respectfully submits that each of independent claim 1 and independent claim 11 distinguishes over Pal ‘011 in view of Pal ‘227 and requests that the 35 U.S.C. 103(a) rejection of claims 1 and 11 be withdrawn.

Claims 2, 4, 5, 7-10, 12, 16-19 and 24 are dependent upon and include the limitations of independent claims 1 and 11. Therefore, for at least the reasons as discussed with respect to independent claim 1 and independent claim 11, Applicant respectfully submits that claims 2, 4, 5, 7-10, 12, 16-19 and 24 also distinguish over Pal ‘011 in view of Pal ‘227 and requests that the 35 U.S.C. 103(a) rejection of claims 2, 4, 5, 7-10, 12, 16-19 and 24 be withdrawn.

Claim 6 stands rejected as being unpatentable over Pal ‘011 in view of Pal ‘227 as applied to claims 1, 4, and 5, and further in view of U.S. Patent No. 5,926,139 to Korisch (“Korisch”). As discussed in regard to the 103(a) rejection of claims 1 and 11, Applicant submits that there is no teaching by either of Pal ‘011 or Pal ‘227 of first and second antennas formed on at least one planar portion of a common support element.

Korisch is referred to in the Office Action as showing that “an inverted-F antenna is a planar device formed on a substrate.” The Office Action indicates that “it would have been obvious to the skilled artisan to employ such an antenna in the Pal et al. devices.” As discussed in the Examiner Interview, Applicant respectfully disagrees that it would have been obvious at the time of the invention to employ the planar-F band of Korisch in the antennas of Pal ‘011 or

Pal '227. Korisch illustrates a planar F-antenna for use in two frequency bands that includes radiating portions for the two bands joined by a connecting portion and spaced from a ground plane. In contrast, Pal '011 and Pal '227 describe helical multi-element antennas having cylindrical support structures. Applicant respectfully submits that one of ordinary skill in the art at the time of the invention would not have been motivated to seek out the planar-F antenna of Korisch and combine it with the helical multi-element antennas of Pal '011 and Pal '227. In addition, Applicant submits that, even if such a motivation is assumed to have existed, there is no teaching or suggestion that the planar-F antenna of Korisch be integrated with the cylindrical support structures of Pal '011 and Pal '227. For at least the foregoing reasons, Applicant respectfully submits that claim 6 distinguishes over Pal '011 in view of Pal '227 and further in view of Korisch, and requests that the 35 U.S.C. 103(a) rejection of claim 6 be withdrawn.

Claims 13-15, 16/13, 16/14, 16/15 stand objected to as being dependent upon a rejected base claim, but are indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 20-23 have been allowed. Applicant wishes to thank the Examiner for the indication of allowable subject matter with respect to claims 13-15, 16/13, 16/14, 16/15 and the allowance of claims 20-23.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

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